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A Preliminary Analysis of
Educational Needs for
Navy Health Care Executives

Alice M. Crawford
Benjamin J. Roberts
Kenneth L. Orloff

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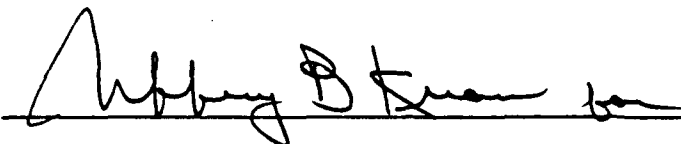   Reproduction of all or part of this report is authorized.

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A Preliminary Analysis of Educational Needs

for Navy Health Care Executives

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ABSTRACT

The Bureau of Medicine and Surgery and the Naval Postgraduate School have initiated the development of an innovative program in management education for senior Naval health care executives. The first phase of the development was based on interviews with 80 executives to determine their perceptions of the skills needed to effectively manage military treatment facilities. The interview findings became the basis of a survey-based needs analysis, which is the focus of this report. Data analyses were focused on the requirements for specific management skill areas, needs for education in these domains, and how these perceptions differ as a function of rank, position, and corps of the respondents.

EXECUTIVE SUMMARY

In response to the need for military health care executives to expand and refine their management expertise, the Bureau of Medicine and Surgery (BUMED) and the Naval Postgraduate School (NPS) have initiated an innovative program to provide management education. The curriculum is based on an analysis of Navy needs and will be delivered at Military Treatment Facilities (MTFs) or central regions to minimize interference with the primary duties of health care executives. This report contains the results of a survey-based needs analysis.

During the first phase of this project, faculty members from NPS conducted interviews with 80 senior medical department executives to determine the knowledge, skills, and abilities (skill areas) necessary for effective management at MTFs. The results of the interviews were used to create a survey specifically tailored to the needs of Navy health care executives. The use of the survey provided the opportunity to evaluate the relative importance of skill areas generated by the interviews, to inventory respondents' previous management experience and education, and to quantify the findings with a larger population of senior executives within Navy Medicine.

The survey questionnaire contains 60 questions in which respondents are asked to evaluate their current, individual skill levels, and then to evaluate the generic skill requirements of the positions they occupy (independent of the individual in the job). The questionnaire was sent to 720 senior executives in Navy medicine; 67 percent were returned.

Data analyses were concentrated on the compatibility between the present findings and the results of a study conducted by a Department of Defense (DoD) task force, the requirements for specific skill areas, needs for education in skill areas, and perceptions of how requirements and needs differ as a function of rank, position, and corps of respondents. Rank was used to a limited extent. Corps groups included Nurse Corps (NC), Medical Corps (MC), Dental Corps (DC), Medical Service Corps, Health Care Administration (MSC(HCA)), and Medical Service Corps, Allied Health (MSC(AH)). Position, with rare exception, included those currently serving at MTFs: Commanding Officers (CO) of more than 12 months on the job (>12) and less than 12 months (<12), Executive Officers (XO) of more than 12 months and less than 12 months, directors, and department heads. The conclusions of the research are as follows:

1. Using an entirely different methodology than the DoD task force, the NPS results validated the need for an executive management education program to include the 20 skill areas identified by DoD plus one new category learned directly from executives in the field.

2. Survey respondents further validated the importance of the 21 skill areas in that over half of them rated the requirements for each skill area as "high" (8-10 on a 10-point scale). Skill areas were not seen as equally important-- ratings ranged from 55-94 percent. The skills most frequently rated as highly required tend to be "non-shared" skills (those for which there is typically no subordinate with that skill as his/her primary responsibility), for example, communications.

3. Cohorts with the rank, corps, and position groups believe all 21 skill areas are important for their particular management roles although nurses and admirals assigned much higher ratings to skill requirements as compared to other cohorts.

4. There is a need for management education for people currently serving as senior health care executives. Survey respondents indicated knowledge gaps in each of the 21 skill areas--45-74 percent perceived a gap between the required skill level and their current skills in given skill areas.

5. Differences were found across cohorts in terms of educational need. For example, the MSC(HCA) cohort had fewer members reporting gaps as compared to other cohorts; new executive officers (XO < 12) have more members with reported gaps; and outliers were found among the specific skill areas that various cohorts report as high need areas. These findings can be used to tailor the development of the BUMED-NPS executive management education program.

The approach used in this research and development program included visits to MTFs to test prototype management education modules prior to the completion of the needs analysis. This method has given NPS team members valuable information that will now be used in conjunction with the survey results to develop and deliver a program that is responsive to the unique needs of Navy health care executives.

I. INTRODUCTION

Background

Health care is undergoing a period of dynamic change. As the complexity of health care delivery continues to grow, health care executives are struggling to control rapidly rising costs and to maintain quality standards while still meeting the needs of the consumer. As a result, health care executives must constantly expand and refine their leadership and managerial effectiveness to meet the demands for change.

Military health care executives are currently operating in a particularly turbulent environment. The Base Realignment and Closure process, continuing congressional interest, implementation of the Coordinated Care Program, sophisticated management information technologies, and various Department of Defense (DoD) initiatives contribute additional managerial challenges.

The need for military health care executives to expand and refine their managerial knowledge, skills, and abilities was formalized in Section 8096 of the fiscal year 1992 and 1993 Department of Defense Appropriations Act, which says, "None of the funds appropriated in this Act may be used to fill the commander's position at any military medical facility with a health care professional unless the prospective candidate can demonstrate professional administrative skills." In order to implement this requirement, the Assistant Secretary of Defense (Health Affairs) convened a task force to conduct an extensive review of civilian and military health care administrative practices, and to identify the unique needs for military commanders. The report of the task force, which was released by Schwartz and Cox in 1992[1], included a comprehensive list of knowledge requirements of executive managers of military medical treatment facilities. This list was derived, in part, from industry analyses, which addressed similar considerations.

In an independent effort in May 1992, the Navy initiated a program to meet the specific needs of Navy Medical Department executives. At this time, the Bureau of Medicine and Surgery (BUMED) entered into partnership with the Naval Postgraduate School (NPS), Department of Administrative Sciences, to develop an Executive Management Education (EME) Program. A two-phased approach was designed: (1) identify Navy Medicine's unique needs for executive management skills, knowledge, and abilities; and (2) design, develop, and conduct programs tailored to these needs.

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[1] Judy Schwartz and Kenneth Cox, "Administrative Skill Qualifications for Command of Medical Facilities Task Force" (Washington, DC: Assistant Secretary of Defense for Health Affairs, 1992), 17, typewritten.

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NPS has proposed an innovative, "managed education" program. In addition to curriculum based on an analysis of Navy needs, the plan includes the delivery of education in modules that target specific educational objectives but which can be administered selectively to recognize the educational background of individuals. Modules can be delivered at specific military treatment facilities (MTFs) or geographic regions in order to minimize interference with the primary duties of health care executives. The curriculum can be further tailored to meet the needs of specific MTFs through prototype testing of modules and on-going NPS faculty liaison with specific sites. NPS initiated prototype module testing in January of 1993 even though the needs analysis was not complete. In the interest of efficiency, NPS decided to continue to gather information through such testing while concurrently completing the needs analysis.

In order to identify the unique managerial requirements for Navy executives, the needs assessment was designed to consist of field interviews and a survey. During June and July of 1992, 80 semi-structured interviews were conducted with senior medical department executives at 11 MTFs and BUMED to determine what skills they thought were necessary for Navy health care executives. The issues of who should receive management education, when they should receive it, and how it should be delivered were also explored.

During the interviews, executives were asked to identify the key managerial knowledge, skills, and abilities (skill areas) deemed important for effective and efficient functioning as a health care executive. The methodology used created a situation in which the persons interviewed were neither constrained nor directed by the interviewers. The purpose was to produce only items that interviewees identified of their own accord, and, in fact, a long list of needed managerial skill areas was generated. The results of the research indicate that the Navy Medical Department perceives a strong need for management education; that particular need areas can be identified; that competency levels vary across executives but that nearly everyone feels that they are not fully prepared to meet future demands; and that traditional approaches to executive education (i.e., standardized curricula and campus-based learning) will not be adequate to meet the identified needs in a timely manner.[2] The interview results were used to develop the second step in the needs assessment, the survey, which is the focus of this report.

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[2] Naval Postgraduate School, "Management Education for Senior Executives of Military Medical Treatment Facilities" (Monterey, CA: Naval Postgraduate School, Department of Administrative Sciences, 1992), 21, typewritten.

Purpose

This report presents the results of the survey that was designed, developed, administered, and analyzed by NPS faculty to serve as the foundation for the EME program for Navy health care executives. There are three objectives of this research phase:

1. To determine the requirements for each management skill area generated during the interviews. That is, how important do Medical Department personnel think these skills are for effective executive management? Are they all equally important? Are some more important than others? Further, are the skill areas congruent with those generated by the Schwartz and Cox (1992) research, excluding military readiness requirements? This objective addresses the broad, long-term consideration of what should be taught to future Navy health care executives.

2. To determine the need for education in each management skill area surveyed. This objective addresses both long- and short-term considerations. In the context of the design of the EME program, to what extent do Medical Department personnel need education in each of the skill areas? Is there a perceived need for more education in some areas as compared to others? In the context of short-term needs, these data can be used to guide the selection of modules for prototype testing. Where possible, choices can be made to elect to test a module from a "high need" area while still serving the primary goal of gathering information from on-site (MTF) testing.

3. To examine perceptions of how requirements and needs differ as a function of characteristics of the survey respondents. This report addresses corps, and position (principally positions within an MTF are considered for the present research), which are assumed to be primary considerations in designing an EME program. Rank is considered to a lesser extent. Some of the questions of interest include, do people from the Medical Corps (MC) attach different levels of importance to skill areas as compared to members of the Nurse Corps (NC)? Do members of the Medical Service Corps, Health Care Administration (MSC(HCA)) express need for differing types of education as compared to members of the Medical Service Corps, Allied Health (MSC(AH))? Do members of the Dental Corps (DC) express the same needs as others? Do perceptions differ as a function of rank or position? Other variables, for example, background in management education, will be examined in future reports. Clearly, if a program tailored to individual needs--one that recognizes previous experience, educational background, etcetera--is to be designed, examination of these data is critical.

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The survey, like the interviews, dealt with the important skill areas in management. In the case of the survey, however, respondents were asked to make judgments about the specific skill areas generated from the interviews. The use of a survey allowed the researchers to evaluate the <u>relative</u> importance of skill areas generated by the interviews, to inventory respondents' previous management experience and education, and to quantify the findings with a larger population of senior executives within Navy medicine.

II. APPROACH

Survey Development

A team of faculty members used the skill areas identified in the interview process to extract the most-frequently identified items. Utilizing insights gathered from successful "managed care" components in the civil sector, working groups subsequently modified and supplemented the skill areas to develop a full range of potential skills. At this point, no attempt was made to limit the number of skill areas or ensure a consistent presentation style. Once this was completed, a final working group was formed to accomplish the task of condensing the multiple skill areas developed by the various working groups, and to determine a presentation style and appropriate rating scale. Additional modifications were made to the content of the questionnaire as a result of comments collected from the Executive Medicine Quality Management Board.

In order to ensure that the final survey questionnaire would be clearly written and easily understood by the respondents, field tests were conducted in October 1992 at Naval Hospital Long Beach, CA and Naval Hospital Camp Pendleton, CA. During the field testing, the Commanding Officer, Executive Officer, and Directors for each facility completed the questionnaire individually in the presence of a two-person, NPS team. Individual executives were then requested to comment on each question as they answered it, with specific attention given to potentially ambiguous, confusing, or misleading questions. Additionally, the recommendations of the executives concerning potential additions or deletions to the content of the survey were solicited. Following the completion of the field testing, the NPS team reviewed all comments and recommendations made by the health care executives at Long Beach and Camp Pendleton and modified the proposed questionnaire as required.

Survey Instrument

The survey questionnaire (see Appendix A) begins with a cover letter provided by the Surgeon General of the Navy. The letter was intended to provide the motivation for the completion and return of the questionnaire. The letter articulates the importance of the survey and suggests that a timely response would be beneficial to the Navy Medical Department as a whole. In addition to the Surgeon General's letter, a one-page instruction sheet outlines the intent of the survey and emphasizes the anonymity of all responses.

The questionnaire consists of 60 questions, each focused on a managerial skill area, in which the respondent is asked to evaluate his or her current skill level in that area as well as "...the required level necessary to function effectively as an executive in your role." Both parts of the question utilize an

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eleven-point scale for the response in which "0" indicates no knowledge or ability in the area. A rating of "1" to "3" indicates a low level, a "4" to "7" a moderate level, and a rating of "8" to "10" indicates a high level.

The questions are organized within a framework of eight categories determined by the results of the interviews. The survey concludes with a section designed to obtain background information on the survey population. Survey respondents are asked to provide demographic data as well as an inventory of prior education and training in management.

Survey Administration

The final survey questionnaire was mailed to 720 senior executives in Navy medicine, including: all incumbent Commanding Officers, Executive Officers, Officers-in-Charge, and Directors; all officers currently screened for Commanding Officer and Executive Officer billets; key health care executives in the operational forces and headquarters commands; specialty advisors; and medical department flag officers. A listing of these billets and/or individual officers was compiled from the Commanding Officer/Executive Officer screening list, key Command personnel listing, and the specialty advisor lists provided by BUMED. Additional modifications were provided by the appropriate Bureau of Naval Personnel assignment officers.

The survey questionnaires were mailed on 14 November 1992 and the last returns (for the purpose of this research) were received on 14 January 1993. A total of 476, of the 720, were received. However, because thirteen were returned as undeliverable, a total of 707 was used as the basis for computing the return rate of 67 percent.

Data Analysis

There are three measures generated by the survey that could be used for the purpose of determining the educational needs for MTF executives: ratings of current skills, ratings of required skills, and the difference, or delta, between the perception of what is required for the job and one's current competency level. It may not be appropriate to compare currents skills across individuals. For example, the "7" rating of one individual may not really mean the same as the "7" from another person. For this reason, the current skills were intended only to be used to compute the deltas, that is the expressed "gap" or educational need that results from subtracting the current skill level from the required skill level. Thus, the analyses presented in this report rely on the deltas and the assessments of skill requirements. All responses were entered for data analysis using the Statistical Analysis Software package on the mainframe computer at NPS.

III. RESULTS AND DISCUSSION

This report provides the first comprehensive look at the data generated by the survey questionnaire. It is important to emphasize that the data are based on self-perceptions and may lack some objectivity, particularly in the case of asking respondents to estimate their current skill levels. Nonetheless, learning about educational needs directly from the "customer" is critical to the goals of this program.

This chapter begins with a description of some of the important characteristics of those who responded to the survey, and some information about how the data were reduced for analysis. Subsequent sections of the chapter present the data characterizing respondents' perceptions of required skill areas and levels of need for education in the skill areas.

Respondent Characteristics

Some of the important characteristics (those that are of interest in the present research) of the persons who responded to the survey are shown in Tables 1, 2, and 3. In these tables, and the analyses to follow, there are missing data; not every respondent answered every question. Thus, the total number often varies slightly from the original 476 survey respondents.

Tables 1-3 show the 476 individuals who responded to the survey questionnaire, divided into three groups with several cohorts in each group. The proportion of each cohort tracks very closely the proportion represented in the 720 surveys originally sent. Since the 720 original surveys targeted virtually every executive in Navy Medicine, it can be concluded that the data presented here are representative of that population.

Table 1 shows the rank of all who responded to the survey, and the percentage of the entire group represented by each rank. The "other" category includes ten lieutenants, one master chief, and three civilians. Consistent with the goal of targeting the population of senior Navy Medical Department executives, 88 percent of the group hold the rank of commander, or above.

Table 2 displays the corps reported by each of the survey respondents and the percentage they represent of the total. There are 434 persons represented on this table. With respect to the forty-two persons not included, some did not indicate their corps, but about thirty are from the Medical Service Corps and did not specify if they were MSC(AH) or MSC(HCA)--a condition necessary to answer the research questions.

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Table 1.   Rank of Survey Respondents

Rank	Number	Percent
Admiral	10	2
Captain	312	66
Commander	96	20
Lieutenant Commander	44	11
Other	14	3

Table 2.   Corps of Survey Respondents

Corps	Number	Percent
Medical Corps	154	35
Dental Corps	97	22
Medical Service Corps (AH)	29	7
Medical Service Corps (HCA)	104	24
Nurse Corps	50	12

Table 3 shows the organizational position occupied by respondents at the time of the survey and their representation in the total group of survey respondents. Because of the varied responses reported, the six cohorts displayed in the table were constructed by condensing survey responses into like categories. Appendix B provides a breakdown of the responses placed in each cohort.

The beliefs about management and leadership held by senior executives should be expected to change as a function of time in the job. Preliminary analyses (not presented here) confirmed the usefulness of a two-way categorization for the positions of Commanding Officer (CO) and Executive Officer (XO). Table 3 shows these positions as a function of categories of time (in months) spent by the number of respondents who currently occupy CO or XO billets.

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Table 3. Position of Survey Respondents

Position	Number	Percent
Commanding Officer < 12	48	10
Commanding Officer > 12	49	10
Executive Officer < 12	33	7
Executive Officer > 12	38	8
Director	143	31
Department Head	44	9
Operational Forces	16	3
Other	104	22

Data Reduction and the DoD Categorization Scheme

In order to make the data more manageable as well as useful, the data had to be reduced in some manner. Since the interview data had suggested eight very broad categories for the 60 items, initial data analyses were run using this scheme. A presentation of all of the analyses may be found in an NPS thesis by J.R. Morrison.[3]

Subsequently, the researchers decided to determine if the 60 items from this survey could be matched to the 20 categories of skills established by Schwartz and Cox (1992) as essential for executive management of MTFs. The issue of consensus in the list of skill areas generated interest due to cross validation with three independent analyses conducted by organizations recognized as representing substantial expertise in health care executive management.

Four members of the NPS faculty independently categorized the survey items in the manner of the DoD report scheme and concluded that there was a match--with one exception. Three survey items did not have a good fit with the DoD scheme (excluding military readiness items), but seemed too important (based on field interviews) to drop. The items were:

Survey item 12--"Understanding the interrelationships of

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[3] John R. Morrison, "The Relationship Between the Perceived Executive Management Capabilities of Senior Navy Medical Department Executives and Their Reported Managerial Requirements" (M.S. Thesis, Naval Postgraduate School, 1993), 78.

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departments and functions of military treatment facilities, i.e., the systems perspective."

Survey item 33--"Understanding the support requirements of the operating forces."

Survey item 36--"Developing a non-parochial/generalist perspective."

Since these items are related by the common concept of understanding the system beyond one's own immediate environment, the decision was made to combine these items into a new category called, "Systems Perspective." Thus, it was concluded that this research--using an entirely different approach than the DoD task force--had validated the need for an EME program to include the 20 skill areas identified by DoD, plus one new category learned directly from executives in the field. The 21 categories and the corresponding questionnaire items can be seen in Appendix C. These categories are the basis for the analyses contained in this report.

Skill Requirements for Executive Roles

An important objective of the present research effort is to determine the requirements for each management skill area included on the survey. To begin to address this issue, the ratings assigned by each respondent to the required level for each skill area (categorized as "high," "medium," or "low") were summed. Initial analyses of the required skill levels revealed that most responses fell in the "moderate" or "high" categories. This, of course, was no surprise since the survey items were designed based on skill areas frequently described as important in the interviews. The only expectation for this particular analysis was to be able to quantify and compare the findings. In order to make the data more manageable and useful, the researchers decided that the percentage of responses falling in the "high" category would be a meaningful measure of skill requirements. Using this particular measure leaves no doubt about the value/importance of a particular skill area.

Skill Requirements Perceived by All Survey Respondents

Table 4 shows the 21 management skill areas with the percentage of respondents who reported the requirements for each area as "high." Over half of the survey respondents rate the skill areas as important for executive management of MTFs, but they are not viewed as equally important. Eighty percent or more rate 11 of those skills as highly required. It is interesting to note that the skills rated most important to function as an executive at an MTF, (e.g., Management of Change, Conflict Management, etc.) tend to be skills for which the CO has no in-house expert/principal advisor. The skills that fewer people reported as highly required (e.g., Financial Management, Information Management, etc.) are

exactly the opposite, that is, areas where expertise is readily available. It stands to reason that executives place the most importance on "non-shared" skill areas.

Table 4. Percent Reporting That Requirements are "High" in Each Skill Area

Management Skill Area	Percent
Management of Change/Technology	94
Conflict Management	92
Communications	91
Individual Behavior	90
Group Dynamics	89
Ethics	88
Systems Perspective	88
Organization Design	88
Quality Management	81
Personnel Management	81
Decision Making	80
Legal Issues	72
Productivity Management	70
Strategic Planning	64
Alternative Health Care Systems	64
Financial Management	58
Labor/Management Relations	56
Information Management	56
Facilities Management	55
Quantitative Analysis	55
Materials Management	55

This section of the data presentation has dealt with estimated skill requirements for each of the 21 categories. For those interested in looking at individual survey items, these data are presented in Appendix D.

Skill Requirements Perceived by Groups

An additional research objective was to examine how the perceptions of skill requirements might differ as a function of characteristics of the survey respondents. Variability by rank, corps, and position are examined here.

Figure 1 shows the percentage of respondents within each rank that rated skill requirements as "high." While there are only ten admirals in the group, it is interesting that, on average, they place high importance on the selected skills. A more detailed analysis in which the data are broken out by the 21 categories (not presented here), showed that admirals' ratings are highest in every category. It is not possible to determine if the data reflect greater importance for those skills at the admiral level, a different set of perceptions based on more time/experience in the system, a point of view for admirals that offers the "big picture," or some other, unaccountable factor. Captains, commanders, and lieutenant commanders have similar overall ratings.

FIGURE 1. PERCENT REPORTING "HIGH" REQUIRED KNOWLEDGE LEVELS, BY RANK
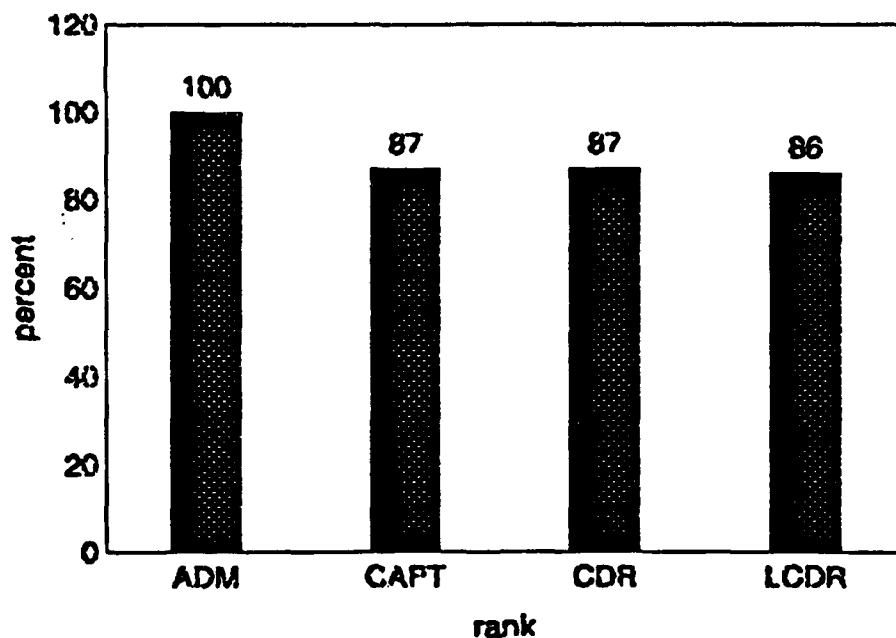
Figure 2 shows the percentage of respondents within each corps that rated skill requirements as "high." The group ratings are similar, with the exception of the nurses who have a slightly

higher percentage of their group who fall into the "high" category. When the data are broken out into the 21 categories (an analysis performed but not shown in detail here), nurses have the highest ratings for required skills in 16 categories. In some cases, the differences in ratings between NC and other corps are small (a few percentage points) but there are large differences in several categories. Included here are Strategic Planning (the NC rating is 21 percent higher than the next group); Productivity/Outcomes Management (21 percent); Labor/Management Relations (18 Percent); Group Dynamics (13 percent); Legal Issues (12 percent); and Individual Behavior (10 percent). The data suggest that these management skill areas are perceived as particularly important for executive roles occupied by nurses. Again, however, it is not possible to determine exactly what drives these data. It may be, for example, that nurses simply tend to assign higher ratings as compared to members of other corps. These skill areas need to be explored further to determine if there is a unique need for nurses to receive education in these areas.

FIGURE 2. PERCENT REPORTING "HIGH" REQUIRED KNOWLEDGE LEVELS, BY CORPS
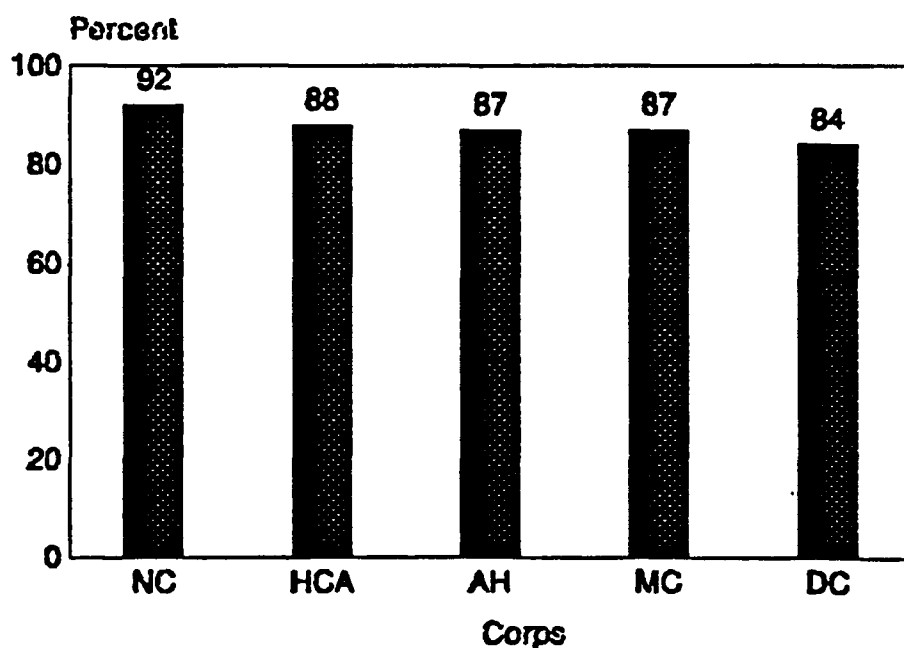
Figure 3 displays the percentage of respondents within each position that rated skill requirements as "high." The table shows that the groups are very similar in their ratings of skill requirements as a whole.

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FIGURE 3. PERCENT REPORTING "HIGH" REQUIRED KNOWLEDGE LEVELS, BY POSITION
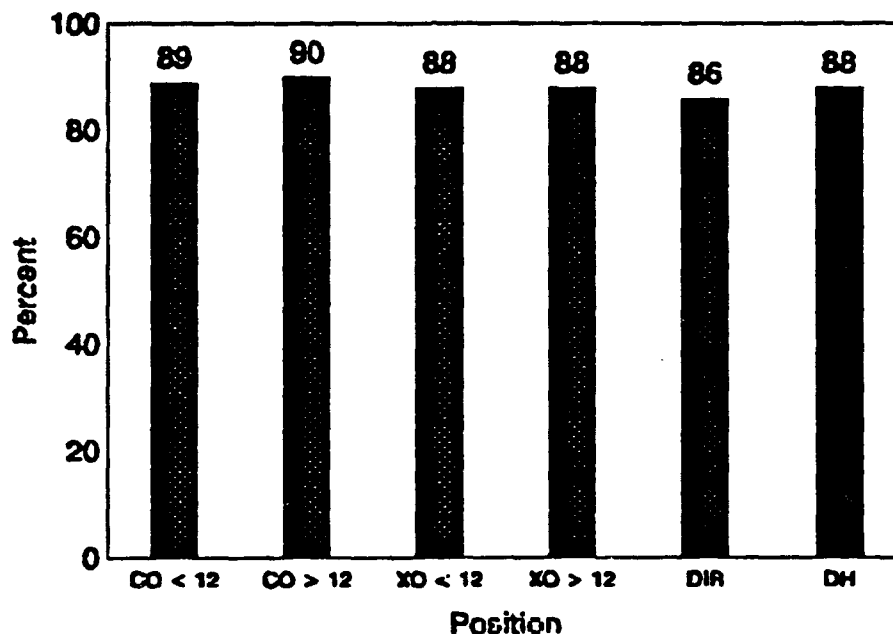
The data presented in this section confirm the general consensus on the importance of the skill areas surveyed. Within all of the groups examined, the majority of the respondents say that requirements for the management skill areas are "high." The next set of analyses was designed to identify specific skill areas rated especially high by any group that were not seen in the general pattern (Table 4) produced by all survey respondents.

First, it was determined that the variable "Rank" was not useful for this next, more detailed, set of analyses. Since rank is not consistently related to position, and position is critical for determining specific management educational requirements for targeted groups, rank is not considered here.

The percentage of persons who rated each skill area "high" was tallied and ranked from highest to lowest for each of the corps and positional groups. This created 11 tables (not included here) like Table 4--one for each of the five corps groups and six positional groups. With slight variations, the 11 sets of rankings mirror Table 4. For example, on the ten highest percentage skill areas (Management of Change to Personnel Management on Table 4) the only variation seen was the inclusion of Decision Making or Legal Issues

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(the eleventh and twelfth items on the list for all respondents in Table 4) in place of Personnel Management or Quality Management. The groups are remarkably similar in their perceptions.

The data confirm that the design of the EME program should include all 21 skill areas. The immediate need for knowledge in these areas may fluctuate over time and across MTFs, but the program envisioned will be flexible and responsive enough to take this into account.

Needs for Management Education

Another critical objective of this research is to determine the need for education in each management skill area surveyed. To address this issue, the current skill level was subtracted from the required skill level for each of the items within the 21 categories, for each individual. The procedure created deltas, which belong to one of three different categories. First, a negative delta indicates a response in which current skills are perceived as exceeding required skills. Second, a delta of zero means the respondent feels that current knowledge is equal to required knowledge. Third, and of primary interest to this research, a positive delta reflects a required skill that is higher than the current skill level and provides a measure of the gap and implied educational need.

Needs for Management Education--All Survey Respondents

Table 5 shows the 21 management skill areas with the percentage of respondents who reported a gap in their knowledge of each area. Overall, respondents indicated knowledge gaps in all of the skill areas--there is no single domain in which responses do not indicate a need for further management expertise. Additionally, the need is not perceived as equal for each of the areas. The figures vary from 45 percent to 74 percent of Navy health care executives who perceive a gap between current and required skills in a given management domain.

Generally speaking, the data shown in Table 5 present the opposite pattern shown in Table 4. The areas that are high on Table 4 (i.e., rated by many as important for effective and efficient functioning in an executive role at an MTF) tend to be low on Table 5 (i.e., fewer respondents report gaps in these areas as compared to others).

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Table 5. Percent Reporting Skill Gaps in Management Skill Areas

Management Skill Area	Percent
Ethics	45
Systems Perspective	46
Group Dynamics	51
Individual Behavior	51
Communications	54
Organization Design	55
Legal Issues	56
Management of Change/Technology	56
Decision Making	57
Personnel Management	59
Facilities Management	60
Materials Management	63
Conflict Management	63
Quantitative Analysis	67
Financial Management	68
Alternative Health Care Systems	70
Productivity Management	70
Quality Management	71
Labor/Management Relations	72
Strategic Planning	72
Information Management	74

The "non-shared" skill areas for which more respondents seem to be comfortable in their knowledge tend to be in the behavioral science areas, for example Ethics or Group Dynamics. Areas such as these are often difficult to rate. Self-assessing one's own knowledge in financial management, for example, can draw on concrete evidence of that skill. On the other hand, areas that do not lend themselves to quantification sometimes make for difficult self-assessment in terms of accuracy, thus often leading to biased

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ratings. This is the case where a survey, while practical, falls short of a more objective needs analysis. Nonetheless, in spite of the opportunity for inflation in the ratings, close to half or more of the respondents see a knowledge gap in all skill areas.

The highest need areas shown on Table 5 tend to be the "shared" responsibilities discussed earlier. It makes a certain amount of sense that executives see a gap in their skills in these areas, yet view them as relatively less important for their management responsibilities.

The data presented in this section demonstrate the current need for education for incumbent executives. Educating incumbent executives is one added benefit of the plan to deliver educational modules as soon as they are developed. For those interested in looking at the data in more detail, ratings on individual survey items, are presented in Appendix D.

Needs for Management Education--Groups

It is also important to determine how the perceptions of skill gaps might differ as a function of rank, corps, and position. Figure 4 shows the percentage of respondents within each rank that perceive gaps between current and required skill levels. Not surprisingly, the lowest percentage of respondents for whom the data indicate a need for management education is the admirals. As noted above, the admirals consistently assigned higher ratings to skill requirements as compared to members of other ranks, and additional analyses (not shown here) demonstrate that they also are consistent in assigning the highest ratings to their current skill levels. In every skill category, the current ratings of the admirals are so much higher than those of other ranks that it is not surprising that the skill gaps they report would be lower than those of other ranks. For example, 90 percent of admirals rate their current skills in quality management "high" as compared to 53 percent for captains, 48 percent for commanders, and 36 percent for lieutenant commanders.

The other ranks shown on the figure have percentages reporting skill gaps that show a small increase as rank decreases. It is important to remember that the delta reflects individual need--the respondent's current skill level subtracted from the more abstract ratings of requirements for "...an executive in your role." In this context it makes sense that larger gaps are expressed by those with less time and experience in the system. However, given the confounding between rank and position mentioned earlier, in addition to the small size of the differences, this finding is of no practical significance in designing an EME program.

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FIGURE 4. PERCENT REPORTING MANAGEMENT SKILL GAPS, BY RANK
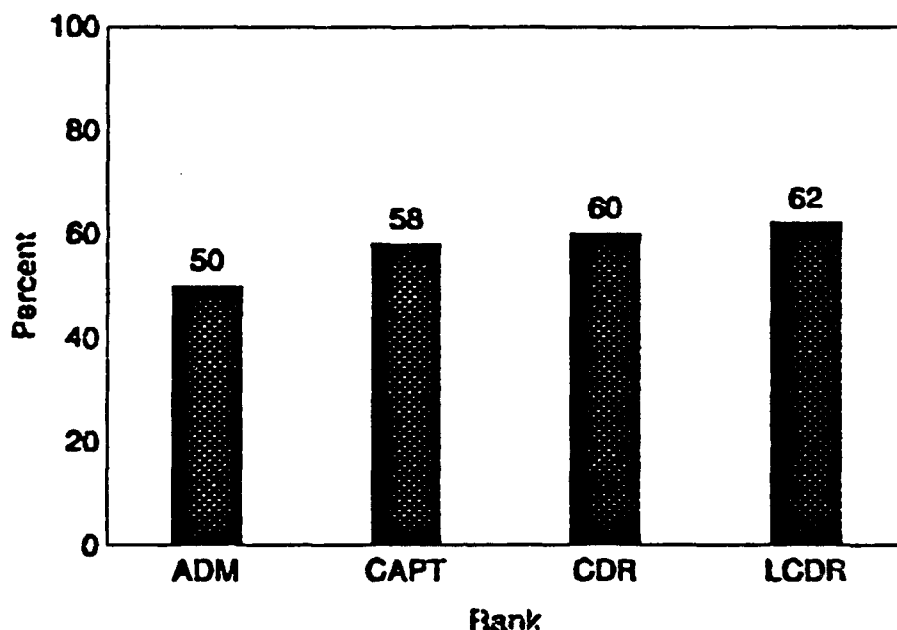
Figure 5 shows the percentage of respondents within each corps that perceive management skill gaps. More nurses than any other group report skill gaps. This finding is largely a function of the high skill requirements that nurses assign to each skill area since current skill levels are no lower among nurses than other groups. While nurses indicate current levels lower than members of other corps in four areas, the differences are only a few percentage points.

Members of the Medical Corps, Dental Corps and Medical Service Corps (Allied Health) report similar percentages of skill gaps, while Medical Service Corps (Health Care Administration) have the fewest number of people reporting skill gaps. The MSC(HCA) respondents rate their current skill levels higher than other groups in 13 categories. Further, in 8 of these 13 categories, the ratings range from 10 to 25 percentage points higher than the next closest group. The high categories are Decision Making, Strategic Planning, Systems Perspective, Financial Management, Materials Management, Productivity/Outcome Management, Facilities Management, and Alternative Health Care Systems. Thus, it stands to reason that there are fewer members of the MSC(HCA) who report skill gaps as compared to the other groups. Given the management-oriented

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training and education necessary for the MSC(HCA) profession, and a management career track commencing at entry level, it stands to reason that this group probably perceives less of a need for education in management than the others. This finding can be explored further in conjunction with prototype module testing and development to determine the extent to which the management education needs of the MSC(HCA) group are unique.

FIGURE 5. PERCENT REPORTING MANAGEMENT SKILL GAPS, BY CORPS
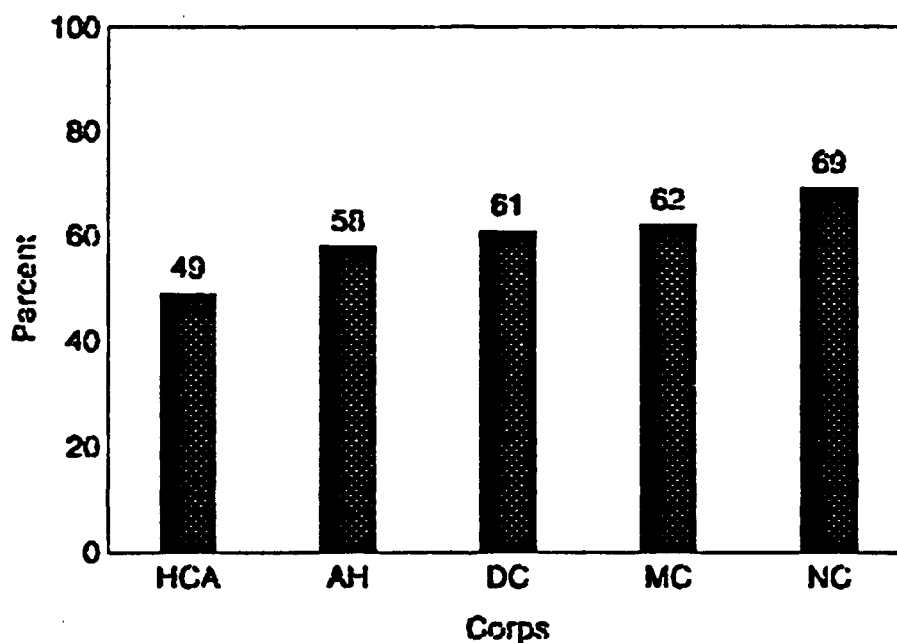
Figure 6 shows the percentage of respondents within each position that report management skill gaps. The figure shows COs and XOs who have been in the job for more than 12 months report the lowest levels of management skill gaps followed by increasing skill gaps on the part of COs of less than 12 months, directors, department heads and XOs of less than 12 months.

The clear outliers in Figure 6 are seasoned COs (those who have been in the job), and XOs new to the job. One would expect a higher "comfort level" from those who have been around the longest and much less comfort among those new to the highest levels of executive management. The finding is further highlighted by the jump in reported skill gaps from 59 percent of directors, many of whom are going to become XOs, to 72 percent of new XOs. Because the XO position is the critical and transitional entry level to

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senior executive management, the management education needs of new XOs are of particular interest here.

FIGURE 6. PERCENT REPORTING MANAGEMENT SKILL GAPS, BY POSITION
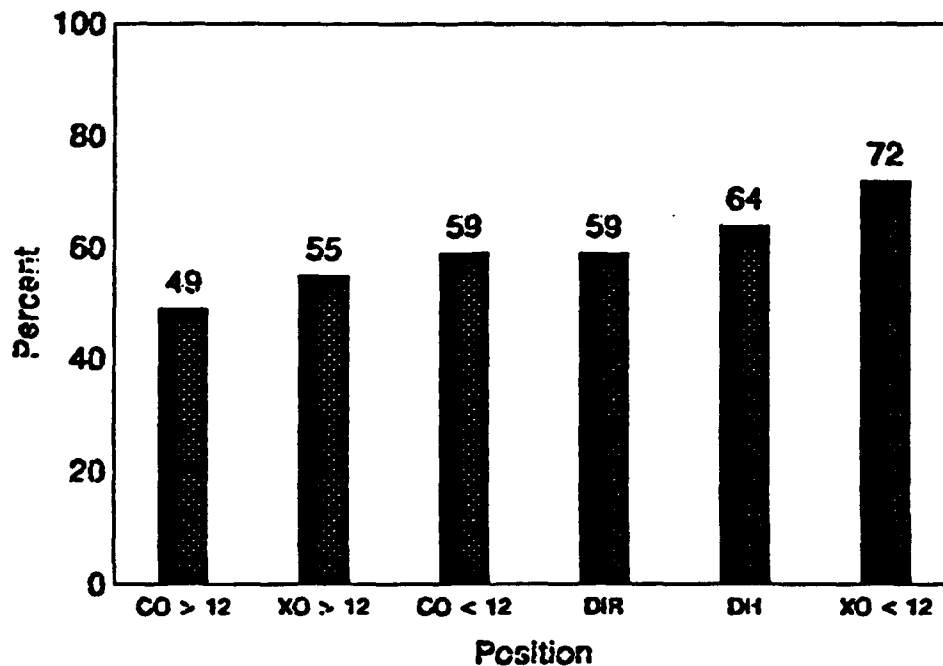
The data presented in this section demonstrate the need for management education for executives of MTFs.   Skill gaps were reported by all of the groups examined; even admirals (on average, half of them on any question) indicate a gap between current and required skills.   Unlike the analysis of skills required for executive roles, in which the there was general agreement among the groups, the analyses of skill gaps show several different need levels within the groups.   The differences seen within corps and position groups may be particularly important.   These differences were expected by the researchers based on field interviews and were, in fact, one of the primary reasons for doing the survey. Identifying these kinds of differences will support the development of an EME program tailored to executives in Navy Medicine.

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It seems reasonable that an MSC(HCA) would not need as much management education as members of the other corps, but does this hold true across all skill areas? Are there any particular need areas, or outliers, within any of the groups? The next set of analyses breaks the data into the 21 categories to determine if perceptions of the groups differ with respect to any of the specific skill areas.

As mentioned before, rank was not considered useful for the more detailed analyses so it is not reported here. The percentage of persons who expressed skill gaps was tallied and ranked from highest to lowest for each of the corps and positional groups. This created 11 tables (not included here) like Table 5. Since it had already been determined that all 21 categories need to be included in the EME program, the ten highest (top ten) need areas were arbitrarily chosen as a manageable number of categories to compare to the top ten produced by all survey respondents. In the case of categories with identical ratings in the tenth and eleventh, and occasionally the twelfth positions, more than ten categories were scanned to identify outliers. The results are shown for corps in Table 6 and for senior executive position in Table 7.

Table 6. Needs for Management Education Unique to Corps

Corps	Unique Management Need
MSC(HCA)	Management of change Communications
MSC(AH)	Personnel Management
MC	Personnel Management
DC	Personnel Management
NC	Decision Making

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Table 7. Needs for Management Education Unique to Positions

Executive Position	Unique Management Need
CO > 12	Management of Change Personnel Management
CO < 12	Management of Change Personnel Management Communications Group Dynamics
XO > 12	None
XO < 12	Management of Change Personnel Management Organization Design Legal Issues

The "unique" management needs shown on Table 7 may seem confusing in that Personnel Management and Management of Change appear for all senior executive positions who have skill gaps that did not show up in the top ten of the total survey respondents. It must be remembered that the senior executives shown in Table 7 represent only 35 percent of the total survey respondents, so unique needs are defined in the context of the larger group. Effectively, the senior executives represented here constitute the most important cohort of those examined because they are currently doing the jobs that can have the most direct impact on effective management in MTFs.

Tables 6 and 7 identify skill areas that NPS researchers can focus on in tandem with the broader EME program development. These areas can be selected for prototype testing, they can guide the evaluation of service short courses that may meet the need, and they can be given focused attention as NPS researchers refine the needs analysis through on-going experience at MTFs.

IV. SUMMARY OF FINDINGS AND CONCLUSIONS

The survey to assess the skills required for effective management of MTFs was sent to 720 Navy health care executives. There were 476 survey questionnaires sent back to NPS for a return rate of 67 percent. The proportion of the cohorts within the groups comprised of rank, position, and corps tracks very closely the proportion represented in the 720 surveys originally sent. Since the 720 original surveys targeted virtually every executive in Navy Medicine, it can be concluded that the data presented here are representative of that population.

Sixty survey questionnaire items, which were derived from interviews in the field with executives at MTFs, were compared to the 20 categories of military health care knowledge, skills, and abilities (referred to here as skill areas) developed in research conducted as part of a DoD task force by Schwartz and Cox (1992). The NPS questionnaire items could be matched to the DoD categories with the exception of three items clustered around the need to have a systems perspective. It is concluded that the present research, using an entirely different approach than the DoD task force, validated the need for an executive management education program to include the 20 skill areas identified by DoD plus one new category learned directly from executives in the field.

The survey took the process a step further by creating the data to quantify and compare the 21 skill areas. Over half of the survey respondents rated the requirements for each skill area as "high" (8-10 on a 10-point scale). However, the skill areas are not viewed as equally important for executive management of MTFs. The percentage of respondents who rate a given skill area as highly required range from 55-94 percent. The skills more frequently rated as highly required tend to be skills for which there is typically no subordinate with that skill as her/his primary responsibility, e.g., Management of Change, Communications, etcetera. In other words, executives view "non-shared" skills as the most important in their management roles.

The ratings of skill requirements were analyzed further to determine any differences in perceptions of cohorts within groups structured by rank, corps, and position in an MTF. The majority of the respondents within each cohort believe all 21 skill areas are important for their particular management roles. Some differences were found in the level of importance attached to each skill area, but no differences were found in the content of what respondents consider required skills. With respect to level, admirals and nurses tend to assign much higher ratings to skill requirements as compared to other cohorts. Admirals, who only numbered ten in the data, do this across all 21 skill categories. Nurse ratings were very high in selected categories. These categories will be explored further to determine if there is a unique need for nurses to focus educational efforts in these areas. With respect to

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content, all cohorts are remarkably similar in their judgements of the relative importance of the management skill areas surveyed. The data confirm the need to include all 21 skill areas in the executive management education program, and further clarify that this content is applicable across the groups examined here.

A measure of the gap between required skills and current skill levels indicated that survey respondents perceive knowledge gaps in each of the 21 skill areas. The figures range from 45-74 percent of health care executives who perceive a gap in a given area. The skills at the high end of that range tend to be "shared" skills-- those least practiced by health care executives. Thus, the "non-shared" skills, which received the highest ratings in terms of requirements, were the skills that respondents feel they know more about. The "non-shared" skills also tend to be "soft" skills, for example, Group Dynamics, which are hard to self-evaluate and thus subject to bias. In spite of the opportunity for inflation in the ratings, close to half or more of the respondents perceive knowledge gaps in these areas. The data support the need for education for executives currently on the job. This should be possible to some extent, increasingly as the program proceeds, given the plan to deliver individual educational modules as soon as they are ready.

The data were examined further to determine if the level of educational need is different across cohorts. The most meaningful difference found was among the MSC(HCA) cohort who have fewer members reporting skill gaps as compared to other groups. These data were very different from the other groups in eight particular skill areas. These areas will be explored further so that the educational program will meet the needs of this cohort as well as the others. Additionally, COs who have been in the job for more than 12 months report the lowest levels of management skill gaps followed by increasing skill gaps for XOs of more than 12 months, COs of less than 12 months, directors, department heads, and XOs of less than 12 months. It is interesting to note that directors have more "comfort" with their managerial skills than the new XOs, which many directors will become. It is concluded that these data from executives currently in place at MTFs is particularly important for the program development and that particular attention should be focused on the new XO--the critical transition point to senior executive management.

A final set of analyses were run to examine differences among cohorts with respect to the content offered by the 21 skill categories. Outliers were found among the specific skill areas that various cohorts report as high need areas. It is concluded that these skill areas, where possible, should be selected for module development and prototype testing. This initial development will meet the need expressed by health care executives and allow NPS faculty members to tailor program development appropriately.

In conclusion, these analyses suggest no need to delete any skill area identified in the survey. All 21 skill areas proved to be important to all Navy Department executives. Ratings of skill requirements identify the overall competencies which must be met to function effectively in an executive capacity and as such define program requirements at steady state. Gaps - the shortfall between skill requirements and skills reported as possessed - define the near term requirements to address incumbents perceived needs. In addition, these data will permit us to tailor program design to meet unique needs by executive position as well as corps. Finally, these data when coupled with an analysis of existing medical department education - training programs will allow us to tailor a program to meet unmet educational needs and avoid unnecessary redundancy in program availability and related costs.

The data presented here are currently being used to provide direction to the design of the EME program. Other continuing activities include prototype testing of educational modules at MTFs, exploration of service short courses and other courses that can meet the educational requirements identified in this data, and analysis of the survey data with respect to educational background of the respondents. These efforts will be documented in future reports.

APPENDIX A

SURVEY OF EDUCATIONAL NEEDS

MANAGING A MILITARY MEDICAL TREATMENT FACILITY: A SURVEY OF EDUCATIONAL NEEDS

This survey is designed to assess your perception of the knowledge and ability required to effectively manage health care facilities, now and in the future. We will use the results of the survey to design executive management education programs.

The survey is based on the views and beliefs of over 100 Navy Medical Department executive managers, elicited through interviews and a pretesting process. As a result, survey questions represent management knowledge and abilities that were most frequently expressed as necessary for managing medical treatment facilities.

Your responses to this survey will become part of the aggregate of responses from others currently serving in executive management positions throughout the Navy Medical Department. The combined results will allow us to quantify the importance of each management skill area.

All information gathered by this survey will be collated, in the aggregate, for statistical use only. The anonymity of each survey participant is assured since no need exists, and no effort will be made, to identify the participants.

Please do the following:

1. Follow the instructions provided in the survey.

2. Complete this survey within five (5) working days.

3. Return your completed survey in the pre-addressed envelope provided for that purpose.

If you have any questions, contact Adj. Research Professor Ken Orloff at (408) 646-3339 or (DSN) 878-3339.

Thank you for your participation.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

This survey has two purposes. It is designed to measure:

1) Your current level of managerial skills.
2) Your perception of the required level of skills for an executive in your role.

Using the scale, rate each of the following managerial activities in terms of your current level of knowledge or ability. A "0" indicates that you have no knowledge or ability in this area. A rating of "1" to "3" indicates a low level of knowledge or ability, a rating of "4" to "7" indicates a moderate level, and a rating of "8" to "10" indicates a high level. Use the numbers within a category to indicate your position more precisely. (Put your ratings in the column labeled "Current Skill Level")

Then, using the same scale, rate the same managerial activities in terms of the required level of knowledge or ability necessary to function effectively as an executive in your role. (Put your rating in the column labeled "Required Skill Level")

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

NONE　　　**LOW LEVEL**　　　**MODERATE LEVEL**　　　**HIGH LEVEL**

CURRENT SKILL LEVEL	REQUIRED SKILL LEVEL	FINANCIAL/RESOURCE MANAGEMENT
_____	_____	1. Interpreting financial statements, e.g., OPTAR, MEPR, NC2199, etc.
_____	_____	2. Recognizing funding sources and limitations of their uses.
_____	_____	3. Evaluating operating (O&M,N) and capital (OP,N) budgets and monitoring their execution.
_____	_____	4. Knowing the resource management advantages and drawbacks of alternative health care delivery systems.
_____	_____	5. Maximizing benefits from third party payer (e.g., insurance companies) reimbursements.
_____	_____	6. Working with the procurement system (negotiating, contracting, evaluating bids, acquiring goods and services).
_____	_____	7. Understanding cost-benefit analysis techniques (make or buy decisions, cost-effective trade-offs).

PROGRAM PLANNING AND EVALUATION

_____	_____	8. Managing a planning process: using models and methods of both strategic and business planning.
_____	_____	9. Understanding methods for evaluating the effectiveness and efficiency of various programs.
_____	_____	10. Evaluating and applying market analysis strategies, including methods to analyze customer needs.
_____	_____	11. Employing quality improvement principles and methods.

1

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

```
    0         1       2       3      4      5      6      7      8      9      10
    |         |       |       |      |      |      |      |      |      |      |
    |       L_____|_____|      L_____|_____|_____|      L_____|_____|
  NONE         LOW LEVEL               MODERATE LEVEL               HIGH LEVEL
```
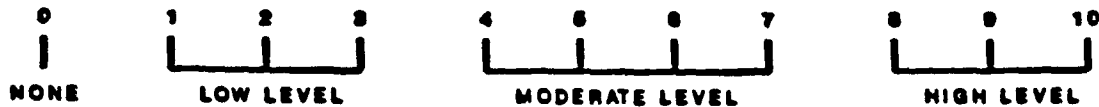
CURRENT SKILL LEVEL   REQUIRED SKILL LEVEL

————————   ————————   12. Understanding the interrelationships of departments and functions of military treatment facilities, i.e., the systems perspective.

DECISION MAKING/PROBLEM SOLVING

————————   ————————   13. Assessing the quality and usefulness of available information when faced with complex problems.

————————   ————————   14. Deciding the extent to which others should be included in decision making.

————————   ————————   15. Using decision making techniques/problem solving approaches and methods.

————————   ————————   16. Using management information systems technologies to solve complex problems.

————————   ————————   17. Using statistical tools in planning and day-to-day decision making.

————————   ————————   18. Understanding the strengths and weaknesses of the statistical techniques that comptrollers or quality assurance analysts most often use.

————————   ————————   19. Understanding how information systems are designed to meet information needs.

————————   ————————   20. Analyzing risks/alternatives.

LEGAL ISSUES

————————   ————————   21. Knowing what constitutes a violation of the Uniform Code of Military Justice (UCMJ).

————————   ————————   22. Knowing what non-judicial punishments are available under the UCMJ.

————————   ————————   23. Initiating appropriate actions for UCMJ violations.

————————   ————————   24. Knowing administrative separation authority and procedures.

————————   ————————   25. Having a working knowledge of liability, both hospital and professional.

————————   ————————   26. Having a working knowledge of environmental impact issues.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

0	1	2	3	4	5	6	7	8	9	10
NONE	**LOW LEVEL**			**MODERATE LEVEL**				**HIGH LEVEL**		

CURRENT SKILL LEVEL	REQUIRED SKILL LEVEL	OPERATIONS MANAGEMENT ISSUES
————	————	27. Understanding the impact of OSHA requirements on hospital operations.
————	————	28. Evaluating the merit of proposals to acquire new technology.
————	————	29. Understanding the opportunities and limitations of the DoD/DoN materials management system.
————	————	30. Overseeing equipment management programs.
————	————	31. Ensuring proper execution of security requirements for the physical plant.
————	————	32. Overseeing facilities management.
		ORGANIZATIONAL BEHAVIOR
————	————	33. Understanding the support requirements of the operating forces.
————	————	34. Developing and communicating a vision for the command.
————	————	35. Empowering individuals and work groups.
————	————	36. Developing a non-parochial/"generalist" perspective.
————	————	37. Building trust.
————	————	38. Managing change.
————	————	39. Managing conflict.
————	————	40. Building teamwork.
————	————	41. Developing a positive organizational climate/culture.
————	————	42. Motivating people.
————	————	43. Employing coordinating mechanisms (e.g., teams, task forces, ad hoc work groups).
————	————	44. Developing subordinates: coaching, teaching, mentoring.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

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   0        1    2    3     4    5    6    7      8    9   10
   |        |____|____|      |____|____|____|      |____|____|
  NONE      LOW LEVEL        MODERATE LEVEL         HIGH LEVEL
```

CURRENT SKILL LEVEL   REQUIRED SKILL LEVEL

——————   ——————   45. Understanding the role/scope of the job of CO/XO.

——————   ——————   46. Promoting innovation and risk taking behavior.

MANPOWER AND HUMAN RESOURCE MANAGEMENT

——————   ——————   47. Managing civilian personnel according to regulations and procedures.

——————   ——————   48. Managing military personnel according to regulations and procedures.

——————   ——————   49. Evaluating manpower and staffing needs.

——————   ——————   50. Managing labor relations (union negotiations, grievances, etc.)

——————   ——————   51. Managing multi-cultural diversity in the workplace.

——————   ——————   52. Building a climate that promotes ethical practices in clinical and managerial operations.

COMMUNICATION

——————   ——————   53. Writing effectively.

——————   ——————   54. Giving positive and negative feedback.

——————   ——————   55. Delivering effective oral presentations.

——————   ——————   56. Listening effectively.

——————   ——————   57. Building and maintaining working and support relationships outside your institution.

——————   ——————   58. Representing the organization to external groups, e.g., public relations functions.

——————   ——————   59. Fostering a climate of open communication.

——————   ——————   60. Conducting meetings effectively.

MANAGING A MILITARY MEDICAL TREATMENT FACILITY - PART I

If a management education program were to be developed for an executive in your role, what level of need would you attach to providing education in each of the following managerial activity groups. Using the scale below, a rating of "1" to "3" indicates a very low level, a rating of "4" to "7" indicates a moderate level, and a rating of "8" to "10" indicates a very high level. Use the numbers within a category to indicate more precisely the level of need.
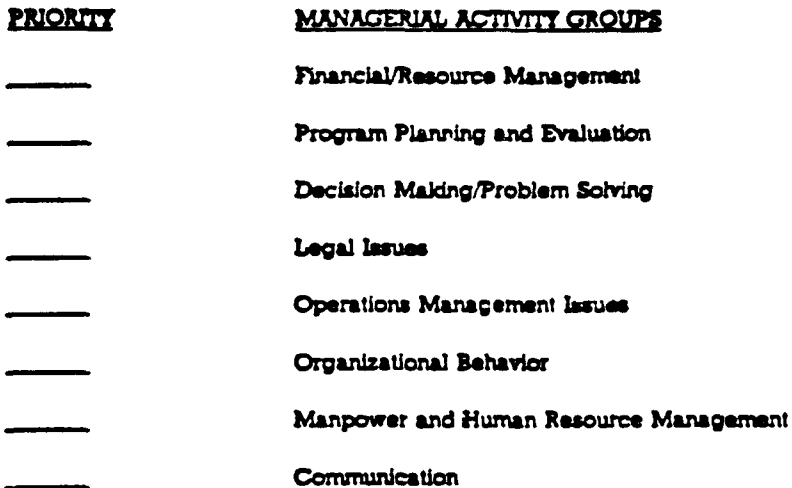
```
   1       2       3       4       5       6       7       8       9      10
   |___|___|       |___|___|___|       |___|___|
 VERY LOW PRIORITY        MODERATE PRIORITY        HIGH PRIORITY
```

PRIORITY	MANAGERIAL ACTIVITY GROUPS
_____	Financial/Resource Management
_____	Program Planning and Evaluation
_____	Decision Making/Problem Solving
_____	Legal Issues
_____	Operations Management Issues
_____	Organizational Behavior
_____	Manpower and Human Resource Management
_____	Communication

Please provide below any additional comments you may have.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

In addition to the "managerial skill level" questionnaire you have just completed, please provide the demographic data and management education information requested below.

This information is part of the data collection effort and will be collated, in the aggregate, for statistical use only. The anonymity of each survey participant is assured since no need exists and no effort will be made to identify individuals participating in this survey.

Instructions: Please check only those blocks that apply in your individual case and legibly complete any other information in the underlined spaces provided for that purpose.

    (1) Demographic Data - blocks involving subspecialty codes should be completed only where codes are formally assigned to you as an individual.

    (2) Management Education/Training - check only those courses/programs you have successfully completed.

DEMOGRAPHIC DATA

1.   Rank: _____   2. Gender: ☐ Male   ☐ Female

3.   Designator: ☐ 21xx   ☐ 23xx   ☐ Other _____
                        ☐ 22xx   ☐ 29xx

4.   Subspecialties: _____   _____   _____
    (List by code if known)

5.   Length of active commissioned service: Years_____   Months_____

6.   Degrees completed: ☐ Bachelors - Major _____
                        ☐ Masters - Major _____
                        ☐ Doctorate - Major _____

7.   Current position/title _____

8.   Facility Size: Beds (Set-up): _____
                 Outpatient Visits (annual): _____
                 Teaching Hospital: ☐ Yes   ☐ No
                      Family Practice Residency Only ☐ Yes   ☐ No

9.   Time served in current position:
    ☐ Less than 6 months   ☐ 6-12 months   ☐ Greater than 36 months
    ☐ 12-24 months   ☐ 24-36 months

10.   Total months service (past and present) in Commanding Officer billets: _____
      Total months service (past and present) in Executive Officer billets: _____

11.   Years in current geographical location: _____

12.   Number of prior managerial positions: _____
    (managerial = >50% of time involved in managerial (non-clinical) tasks)

13.   Years service in managerial positions: _____

MANAGEMENT EDUCATION/TRAINING BACKGROUND

DOD Postgraduate Education Programs

- ☐ Armed Forces Staff College
- ☐ Industrial College of the Armed Forces
- ☐ Naval Postgraduate School
  - ☐ Financial Management
  - ☐ Manpower Planning, Training, Analysis
  - ☐ Information Systems Management
  - ☐ Operations Research
  - ☐ Logistics
- ☐ Army-Baylor University
- ☐ Naval War College
  - ☐ Command and Staff
  - ☐ Naval Warfare
- ☐ Marine Corps Command and Staff College
- ☐ Other Intermediate/Senior Service Schools: _____

_____

Other Traditional Undergraduate/Graduate Management Programs

- ☐ MHA
- ☐ MPH
- ☐ MBA
- ☐ BS (HCA)
- ☐ BBA
- ☐ Other _____

Non-Traditional Postgraduate/Executive Management Programs

- ☐ Univ Wisconsin - Madison (MS Admin Medicine)
- ☐ Physicians in Management (PIM) Series, ACPE
- ☐ Management Education for Physicians (MEP), ACMGA
- ☐ Univ North Carolina - Kron Scholar Program
- ☐ Cornell Univ - Health Executives Development Program
- ☐ Johnson & Johnson - Wharton Fellows Program for Nurses
- ☐ Estes Park Institute (annual seminar)
- ☐ Other _____

MANAGEMENT EDUCATION/TRAINING BACKGROUND (cont)

Service Short Courses
- ☐ Prospective Commanding Officer/Executive Officer
- ☐ Interagency Institute for Federal Health Care Executives
- ☐ Leader Development (LMET)
    - ☐ Command
    - ☐ Senior
    - ☐ Intermediate
- ☐ Strategic Medical Readiness and Contingency
- ☐ Management Development
- ☐ Financial & Material Management
- ☐ Patient Services Administration
- ☐ Plans, Operations and Medical Intelligence
- ☐ Manpower Management
- ☐ Professional Military Comptroller
- ☐ Senior Leaders Seminar (TQL)
- ☐ Other _____

MANAGEMENT CERTIFICATION/ FELLOWSHIP

- ☐ ABMM (Board Certified)

- ☐ ACHE (Fellow)

- ☐ ACMGA (Fellow)

- ☐ ACPE (Fellow)

- ☐ AAMA (Fellow)

- ☐ Other _____

Thank you for your participation in this study. Results will form an integral part of research efforts directed at identifying the knowledge and skills needed to effectively manage health care facilities, now and in the future.

Please return your completed survey (both Parts I & II) in the envelope provided for that purpose to the following address:

SUPERINTENDENT Code AS/Or
Naval Postgraduate School
Monterey, CA 93943-5000

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APPENDIX B

CATEGORIZATION OF EXECUTIVE POSITION COHORTS

APPENDIX B

COHORT	RESPONSES
Commanding Officer	Surgeon General
	Commanding Officer
	Officer-in-Charge
Executive Officer	Executive Officer
Director	Director for Administration
	Director for Ancillary Services
	Director for Branch Clinics
	Director for Base Operations
	Director for Coordinated Care Policy
	Director for Community Health Services
	Director for Field Operations
	Director for Health Services
	Director for Logistics
	Director for Medical Services
	Director for Medical Programs
	Director for Nursing Services
	Director for Occupational Health
	Director for Resources
	Director for Resources, Plans, & Policy
	Director for Service Medicine
	Director for Strategic Planning
	Director for Surgical Services
	Director Area Dental Labs
	Assistant Director Medical Services
	Assistant Director Nursing Services
	Assistant Director Occupational Health
Department Head	Department Head
	Comptroller
Operational Forces	Division Surgeon
	Director Undersea Medicine
	Fleet Liaison Officer
	Fleet Surgeon
	Force Surgeon
	Wing Medical Officer
Other	Anesthesiologist
	Assignment Officer
	Assistant CBR Defense
	Assistant Chief Technical Operations
	Assistant Naval Inspector General
	Assistant Plans and Analysis
	BUMED Division Officer
	Clinic Director
	Chief Naval Dental Corps
	Director Aerospace Medical Division/BUMED
	Deputy Assistant Secretary of Defense

Deputy Chief Medical Corps
Deputy Director/Non-Hospital
Deputy Director Nurse Corps
Director Dental Clinic
Director Health Care Planning/BUMED
Dental Officer
Director Officer Indoctrination School
Director Planning/BUMED
Director Professional Development/BUMED
Director Radiobiology Research Institute
Director Tropical Public Health
Environmental Health Officer
Epidemiologist
Force Master Chief
Medical Corps Detailer
Medical Flag Officer
MSC Career Plans Officer/BUMED
Medical Services Officers
Nurse Corps Plans Officer
Navy Liaison OCHAMPUS
Professor Obstetrics and Gynecology
Oral Surgeon
Physician's Assistant
Program Manager
Specialty Advisor
Special Assistant Evaluations
Special Assistant Headquarters Staff
Senior Nurse IG Team
Staff Audiologist
Staff Physician
Student
Surgeon
Total Quality Leadership Coordinator

APPENDIX C

CATEGORIZATION OF SURVEY ITEMS

**CATEGORIZATION OF NPS SURVEY QUESTIONS
BASED ON DoD APPROACH**

General Management

Decision Making/Problem Solving	Question #
Cost-benefit analysis techniques	7
Quality of available information	13
Decision-making participants	14
Decision-making techniques	15
Risks and alternatives	20

Communications	
Develop & communicate vision	34
Writing effectively	53
Providing feedback	54
Oral presentations	55
Listening effectively	56
Building work/support relations	57
Representing the organization	58
Fostering open communications	59
Meeting management	60

Quantitative Analysis	
Statistical tools	17
Techniques used by comptrollers	18

Information Management	
Using management information systems	16
Understanding the MIS design	19

Managing Quality	
Quality improvement methods	11

Strategic Planning	
Models and methods	8
Market analysis	10
Systems approach	12
Support requirements of operating forces	33
Non-parochial perspective	36

Health Resources Management

Financial Management	
Financial statements	1
Funding sources and limitations	2

APPENDIX D

DATA FOR ALL SURVEY ITEMS

THE TABLES PRESENTED IN THIS APPENDIX SHOW THE PERCENTAGES
OF ALL THE SURVEY RESPONDENTS WHO RATED CURRENT AND
REQUIRED SKILLS IN EACH SURVEY ITEM AS NONE, LOW, MEDIUM
(MED), OR HIGH AND THE PERCENTAGE OF RESPONDENTS WITH
DELTAS THAT WERE NEGATIVE (NEG), NONE, LOW, MEDIUM, OR HIGH

FINANCIAL MANAGEMENT

Question	Neg	None	Low	Med	High
1. Financial Statements					
Current Skills	--	2	25	51	22
Required Skills	--	1	4	39	56
Deltas	13	16	44	26	1
2. Funding Sources					
Current Skills	--	2	24	45	29
Required Skills	--	1	2	28	69
Deltas	11	19	41	26	3
3. Capital Budgets					
Current Skills	--	3	23	47	27
Required Skills	--	2	3	33	62
Deltas	13	20	38	25	4
5. Third Party Payers					
Current Skills	--	13	30	38	19
Required Skills	--	8	11	28	53
Deltas	13	24	32	26	5
6. Procurement System					
Current Skills	--	6	32	47	15
Required Skills	--	2	9	43	46
Deltas	12	20	39	25	4

DECISION MAKING/PROBLEM SOLVING

Question	Neg	None	Low	Med	High
7. Cost Benefit Analysis					
Current Skills	--	3	22	47	28
Required Skills	--	1	5	33	61
Deltas	11	25	38	24	2
13. Information Quality					
Current Skills	--	0	2	33	65
Required Skills	--	0	0	11	89
Deltas	8	33	52	7	0
14. Participation					
Current Skills	--	0	1	27	72
Required Skills	--	1	1	14	84
Deltas	11	47	39	3	0
15. Techniques					
Current Skills	--	0	2	38	60
Required Skills	--	0	1	17	82
Deltas	12	32	50	6	0
20. Risks & Alternatives					
Current Skills	--	1	7	42	50
Required Skills	--	0	1	19	80
Deltas	10	27	52	10	1

MANAGING QUALITY

Question	Neg	None	Low	Med	High
11. Methods					
Current Skills	--	0	4	45	51
Required Skills	--	0	1	18	81
Deltas	10	29	48	12	1

STRATEGIC PLANNING

Question	Neg	None	Low	Med	High
8. Methods					
Current Skills	--	3	19	51	27
Required Skills	--	1	3	32	64
Deltas	10	16	48	24	2
10. Market Analysis					
Current Skills	--	5	20	52	23
Required Skills	--	1	3	35	61
Deltas	12	17	43	26	2

INFORMATION MANAGEMENT

Question	Neg	None	Low	Med	High
16. MIS Use					
Current Skills	--	1	20	58	21
Required Skills	--	0	2	31	67
Deltas	9	13	50	26	2
19. MIS Design					
Current Skills	--	3	24	55	18
Required Skills	--	1	6	48	45
Deltas	11	20	44	22	3

SYSTEMS PERSPECTIVE

Question	Neg	None	Low	Med	High
12. Systems Approach					
Current Skills	--	1	6	30	63
Required Skills	--	1	2	17	80
Deltas	13	37	40	9	1
33. Force Requirements					
Current Skills	--	1	3	32	64
Required Skills	--	1	2	15	82
Deltas	16	36	38	10	0
36. Non-parochialism					
Current Skills	--	1	1	23	75
Required Skills	--	1	1	15	82
Deltas	16	43	36	4	1

PERSONNEL MANAGEMENT

Question	Neg	None	Low	Med	High
47. Civilian Regulations					
Current Skills	--	1	11	52	36
Required Skills	--	2	2	22	74
Deltas	12	20	48	19	1
48. Military Regulations					
Current Skills	--	0	1	33	66
Required Skills	--	1	1	15	83
Deltas	14	35	47	4	0
49. Manpower & Staffing					
Current Skills	--	1	4	45	50
Required Skills	--	1	1	16	82
Deltas	14	28	47	11	0

MATERIALS MANAGEMENT

Question	Neg	None	Low	Med	High
28. Technology Proposals					
Current Skills	--	1	10	57	32
Required Skills	--	1	2	33	64
Deltas	11	26	49	13	1
29. DoD/DoN System					
Current Skills	--	3	21	54	22
Required Skills	--	1	3	41	55
Deltas	10	22	43	22	3
30. Equipment Programs					
Current Skills	--	2	17	56	25
Required Skills	--	1	5	50	44
Deltas	15	28	41	15	1

FACILITIES MANAGEMENT

Question	Neg	None	Low	Med	High
27. OSHA Requirements					
Current Skills	--	3	12	51	34
Required Skills	--	3	4	25	68
Deltas	14	20	49	15	2
31. Security Requirements					
Current Skills	--	2	17	52	29
Required Skills	--	1	6	45	48
Deltas	13	30	41	15	1
32. Facilities Oversight					
Current Skills	--	5	17	52	26
Required Skills	--	3	8	40	49
Deltas	14	30	40	15	1

GROUP DYNAMICS

Question	Neg	None	Low	Med	High
37. Trust					
Current Skills	--	0	0	17	83
Required Skills	--	0	0	7	93
Deltas	8	47	41	4	0
40. Teamwork					
Current Skills	--	0	1	23	76
Required Skills	--	0	1	6	93
Deltas	8	41	46	5	0
41. Climate/Culture					
Current Skills	--	0	1	23	76
Required Skills	--	0	1	5	94
Deltas	7	37	50	6	0
51. Cultural Diversity					
Current Skills	--	0	4	42	54
Required Skills	--	1	2	25	72
Deltas	16	32	46	6	0

QUANTITATIVE ANALYSIS

Question	Neg	None	Low	Med	High
17. Statistical Tools					
Current Skills	--	3	20	57	20
Required Skills	--	1	6	41	52
Deltas	16	19	42	22	1
18. Comptroller Methods					
Current Skills	--	4	21	55	20
Required Skills	--	1	7	36	56
Deltas	12	19	42	25	2

INDIVIDUAL BEHAVIOR

Question	Neg	None	Low	Med	High
35. Empowerment					
Current Skills	--	0	2	24	74
Required Skills	--	0	1	10	89
Deltas	12	42	41	5	0
42. Motivation					
Current Skills	--	0	25	75	0
Required Skills	--	0	1	5	94
Deltas	6	35	53	6	0
44. Subordinates					
Current Skills	--	0	1	24	75
Required Skills	--	0	1	9	90
Deltas	12	39	44	5	0
46. Innovation & Risks					
Current Skills	--	0	1	32	67
Required Skills	--	0	1	14	85
Deltas	16	32	47	5	0

ORGANIZATIONAL DESIGN

Question	Neg	None	Low	Med	High
43. Coordination					
Current Skills	--	1	1	36	62
Required Skills	--	1	1	13	85
Deltas	11	33	47	9	0
45. CO/XO Roles					
Current Skills	--	1	3	28	68
Required Skills	--	1	2	7	90
Deltas	10	37	44	8	1

LABOR/MANAGEMENT RELATIONS

Question	Neg	None	Low	Med	High
50. Labor Relations					
Current Skills	--	7	21	53	19
Required Skills	--	5	6	33	56
Deltas	12	16	44	24	4

CONFLICT RESOLUTION

Question	Neg	None	Low	Med	High
39. Conflict					
Current Skills	--	0	1	30	69
Required Skills	--	0	0	8	92
Deltas	7	30	52	9	2

MANAGING CHANGE/TECHNOLOGY

Question	Neg	None	Low	Med	High
38. Change					
Current Skills	--	0	1	24	75
Required Skills	--	0	0	6	94
Deltas	7	38	50	5	0

PRODUCTIVITY/OUTCOMES MANAGEMENT

Question	Neg	None	Low	Med	High
9. Evaluation Methods					
Current Skills	--	1	15	53	31
Required Skills	--	1	2	27	70
Deltas	10	21	47	21	1

LEGAL ISSUES

Question	Neg	None	Low	Med	High
21. UCMJ Violations					
Current Skills	--	1	4	44	51
Required Skills	--	1	3	19	77
Deltas	12	35	43	9	1
22. NJP					
Current Skills	--	1	8	41	50
Required Skills	--	1	4	24	71
Deltas	17	35	35	12	1
23. UCMJ Actions					
Current Skills	--	1	8	40	51
Required Skills	--	1	3	22	74
Deltas	14	36	37	12	1
24. Admin Separation					
Current Skills	--	1	11	49	39
Required Skills	--	1	5	29	65
Deltas	15	30	38	15	2
25. Liability					
Current Skills	--	1	7	51	41
Required Skills	--	1	2	21	76
Deltas	9	30	46	14	1
26. Environmental Impact					
Current Skills	--	1	12	54	33
Required Skills	--	1	3	27	69
Deltas	10	22	46	20	2

COMMUNICATIONS

Question	Neg	None	Low	Med	High
34. Vision					
Current Skills	--	1	2	35	62
Required Skills	--	1	1	12	86
Deltas	10	33	47	10	0
53. Writing					
Current Skills	--	0	1	19	80
Required Skills	--	0	0	5	95
Deltas	10	41	46	3	0
54. Feedback					
Current Skills	--	0	1	25	74
Required Skills	--	1	0	6	93
Deltas	8	36	51	5	0
55. Presentations					
Current Skills	--	0	1	32	67
Required Skills	--	0	0	7	93
Deltas	11	30	52	7	0
56. Listening					
Current Skills	--	0	1	23	76
Required Skills	--	0	1	4	95
Deltas	8	36	48	7	1
57. Organization Support					
Current Skills	--	1	3	36	60
Required Skills	--	1	1	12	86
Deltas	9	34	47	9	1
58. Representation					
Current Skills	--	1	4	33	62
Required Skills	--	1	1	15	83
Deltas	13	37	43	6	1

Question	Neg	None	Low	Med	High
59. Open Communications					
Current Skills	--	0	1	17	82
Required Skills	--	0	0	5	95
Deltas	8	47	42	3	0
60. Meeting Management					
Current Skills	--	0	0	30	70
Required Skills	--	0	1	7	92
Deltas	9	34	51	6	0

ALTERNATIVE HEALTH CARE DELIVERY SYSTEMS

Question	Neg	None	Low	Med	High
4. Alternative Systems					
Current Skills	--	5	25	50	20
Required Skills	--	4	7	24	65
Deltas	10	20	40	26	4

ETHICS

Question	Neg	None	Low	Med	High
52. Ethics					
Current Skills	--	0	1	23	76
Required Skills	--	1	1	11	87
Deltas	9	46	42	3	0

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